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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,881	06/01/2000	Nesbitt W. Hagood IV	10722-005001	4595

26171 7590 08/29/2002

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EXAMINER

DOUGHERTY, THOMAS M

ART UNIT PAPER NUMBER

2834

DATE MAILED: 08/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/584,881

Applicant(s)

HAGOOD ET AL.

Examiner

Thomas M. Dougherty

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Arguments

Applicant's arguments filed 06/21/02 have been fully considered but they are not persuasive. In response to the Applicant's argument that the Examiner has improperly applied the 35 U.S.C. 112 second paragraph in paper 8, the Applicant has misinterpreted the principle that claims are interpreted in the light of the specification. Although the elements claimed may be found as examples or embodiments in the specification, they were not claimed explicitly. Nor were the words that are used in the claims defined in the specification to require these limitations. A reading of the specification provides no evidence to indicate that these limitations must be imported into the claims to give meaning to disputed terms. *Constant v. Advanced Micro-Devices Inc.*, 7 USPQ2d 1064.

In claims 1, 2, 5, 7, 8, 9, 11 and 12 a description of the electrical circuit in the claim is essential. The effect of these claims, that being to achieve "a peak voltage experienced by the transducer" as being "greater than two times higher than any peak voltage of an open circuit due to the disturbance alone" is only dependent on the coupling alone. So the coupling of an electric circuit, not apparently the circuit itself, comprised of no listed parts in some claims, and few in others, connected or otherwise, is intended to ensure the stated goal. This description is indefinite and it fails to distinctly claim the subject matter which the applicant regards as the invention.

Claims 3 and 4 note controlling an electric circuit based on a measured mechanical state. It is never explicit in the claim language just what the mechanical

state refers to. The mechanical state of what? What kind of mechanical state? How is the circuit controlled? The language here is so broad that the metes and bounds are appear nearly open-ended, as a result these claims are indefinite. As noted in paper 8, there is no methodology in the claims to indicate how the anything claimed is achieved.

Claims 13 and 17 are very confusing embodiments with a description which has not been found in any figure. As claimed, two switches are connected in parallel and each is connected to the second terminus of both the transducer and the inductor. Further a storage element is connected to these switches somehow and simply left hanging there.

Claims 15 and 16 are very broad. It appears that the electric circuit which may be powered by the extracted power or the independent power consists of only one component, that being the switch, which switch apparently performs no function but is merely placed across the transducer. Such a structure would not allow any extracted power to be saved, when the switch is closed every terminal in the structure would be at the same voltage potential. A structure so described is indefinite.

Claims 19 and 20 are broader than claims 15 and 16 and describe not even the switch of claims 15 and 16.

Claims 21-53 are likewise indefinite. Claim 21 merely recites an open-ended list of parts, which list is described in the broadest terms such that it is indefinite. Connections too are not explicit. In claim 25 it is not clear whether the switches are a part of the electrical circuit or that the electrical circuit is the control circuit of the switches.. Claim 37 does not indicate that the transducer is meant to only provide

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power. While it is claimed that the "transducer ... converts mechanical power to electrical power" the claim goes on to note in the next paragraph that "all electrical power supplied to the transducer is derived from power extracted from the mechanical disturbance". What the invention of this claim is intended to do is thus unknown. There are again no metes or bounds as to what the electrical circuit actually is.

Additionally, some the amended claims have at least partly been rendered searchable and art has been applied against them.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5, 7-9, 11-13, 15-17 and 19-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. See paper 8 for rejection of these claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6, 10 and 18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Jidosha (JP11-341837). Jidosha shows (fig. 1) a system for extracting

power, comprising: a transducer (P1) that converts mechanical power to electrical power, the transducer configured for coupling to a disturbance, an electrical circuit connected across the transducer including a rectifier circuit (40) including first and second input terminals and first and second output terminals, the first and second input terminal being connected across first and second terminals of the transducer (P1), an inductor (K1) including first and second terminals, the first terminal being connected to the first output terminal of the rectifier circuit (40), and a subcircuit connected to the second terminal of the inductor (K1) and the second output terminal of the rectifier circuit (40), the subcircuit including a switch (T1) and a storage element connected to the electrical circuit for storing extracted power (C1, C2).

Claim Rejections - 35 USC § 103

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jidosha (JP11-341837). Given the invention of Jidosha as noted above, it is not clear that he controls his switch such that it is switched at a frequency greater than two times an excitation frequency of the disturbance. It would have been obvious to one having ordinary skill in the art at the time the invention was made to so drive the switch of Jidosha since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2e 272, 205 USPQ 215 (CCPA 1980).

Conclusion

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Direct inquiry concerning this action to Examiner Dougherty at (703) 308-1628.

tmd
tmd

August 26, 2002

Thomas M. Dougherty
Primary Examiner
Group 2800